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November 7, 1994
RP:0166

Ms. Rae M. Loui
Commission on Water Resource Management
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

Dear Ms. Loui:

Stream Channel Alteration Permit
West Maui Streams
Waihee, Maui

The proposed project involves installation of appurtenant equipment and 4.26 miles of transmission line for new wells in the Waihee area. The 24 inch water transmission will cross Waihee Stream, an unnamed gulch north of Waihee School, Kalepa Gulch, Kope Gulch, and the North Waiehu Stream. At each of these crossings the pipe will be installed beneath the stream bed.

Our review was prepared with the assistance of James Parrish, Hawaii Cooperative Fishery Research Unit; and Chris Welch, Environmental Center.

Although our reviewers found the referenced application to be generally satisfactory, we offer the following comments on areas where additional information is needed.

Construction Methods and Temporary Facilities

This section of the application specifies use of sheet piling or sheet metal to divert 50 percent of the stream width at a time for the Waihee and Waiehu Streams. However, assessment of the potential impacts to the streams would be greatly facilitated if diagrams and maps were included. The section contains the statement that "a temporary filter berm or siltation net will be placed downstream to minimize dirt, silt, rocks, and other materials from reaching further downstream." Our reviewers were unsure of what was meant by "filter berm". Does this involve filling the stream with material? Without a more detailed description of the size and location of the berms we cannot evaluate their impacts to the stream ecosystems.

Disposal and timing of the removal of sediment trapped in the filter berm or siltation net need to be discussed. Excessive silt build-up could result in a heavy sediment load to the stream if

the collection method (berm or net) is breached during a storm flow. Our reviewers suggest that frequent maintenance of the berm or net is needed. Also, when the filter berm or siltation net is not in use, it should be removed from the stream course to allow for natural stream flow.

The application fails to provide adequate information on the extent of work proposed at each crossing. Where will the berms or silt curtains be placed? How far up and downstream will dredging take place? In addition, no discussion of stream impacts is included. Will the stream be affected by other elements of the construction project (i.e. heavy equipment moving in and out of the stream bed)?

Expected Period of Time Required for Construction within Stream Channel

Our reviewers questioned the amount of time required for construction of the stream crossings. Do these time frames include the equipment set up, or do they reflect the actual amount of time of stream channel disturbance? Having a siltation net or filter berm transecting a stream channel for one to two months could prove unhealthy for recruitment of stream fauna. According to the Hawaii Stream Assessment, both Waihee and Waiehu Streams contain o'opu nakea (Awaous stamineus) and o'opu nopili (Sicyopterus stimpsoni). Additionally, Waihee stream contains o'opu alamo'o (Lentipes concolor). Since these species use the stream channel for spawning migration, channel disruptions should be minimized.

Maps

Since our reviewers rely heavily on the use of visual aids in assessing a project, the maps sent with the permit were helpful in conveying the scope of the project. However, some of the technical details regarding the project were unclear or unreadable. The contour elevations could not be deciphered in many cases. Map reproductions with more readable print would help enormously.

Thank you for the opportunity to comment.

Sincerely,

John T. Harrison
Environmental Coordinator

cc: OEQC
Roger Fujioka
James Parrish
Chris Welch